

A SYNOPSIS OF THE CHRYSIDID GENERA
OF NEOTROPICAL AMERICA
(CHRYSIDOIDEA, HYMENOPTERA)*

BY LYNN S. KIMSEY AND RICHARD M. BOHART

Department of Entomology, University of California, Davis 95616

The chrysidid fauna of Central and South America, including Mexico, differs considerably from that of North America. There are only a few species whose range extends into both regions. The genera *Cleptes*, *Mesitiopterus*, *Microsega*, *Muesebeckidium*, *Pseudolopyga*, *Minymischa*, *Xerochrom*, *Microchridium*, *Hedychreides*, *Chrysura*, and *Chrysurissa* are not reported from South or Central America. A number of genera are not found north of Costa Rica, including *Duckeia*, *Nesogyne* and *Gaullea*. *Trichrysis* and *Neochrysis* have undergone extensive species radiation in the neotropics. The few species in these two genera occurring in North America are their northernmost representatives.

The faunas of Baja California, north central and northwestern Mexico seem to be essentially temperate in origin. The genera *Parnopes*, *Spintharosoma* and *Ceratochrysis* belong to this temperate fauna and are considered in this survey because they are found in Mexico. Several of the genera found only in the southwestern United States may be present in Baja California, Sonora and Chihuahua, Mexico, so specimens from this region should probably be run through the key to the North American genera (Bohart and Kimsey, 1980). The chrysidid fauna of the Caribbean islands, excluding Trinidad and Tobago, appears to be primarily temperate in origin, with only one endemic genus, *Nesogyne*.

The principal work on neotropical Chrysididae has been done by Juan Brèthes, August Brullé, Robert du Buysson, Peter Cameron, Alphonse Ducke, Felix Guérin-Méneville, Karl Krombein, Alexandro Mocsáry and Maximilien Spinola. Lesser work has been done by R. Benoist, H. Bischoff, R. M. Bohart, E. T. Cresson, A. da Costa Lima, Andrea Dahlbom, Vicente Perez-D'Angello, Johann Fabricius, Claude Joseph (H. Janvier), L. S. Kimsey, Walter Linsenmaier and Flaminio Ruiz.

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The two largest chrysidid genera in the neotropics are *Trichrysis* and *Neochrysis*, whose dominance roughly corresponds to *Ceratochrysis* and *Chrysis* in the nearctic fauna. Detailed examination of *Trichrysis* in both hemispheres has revealed four distinct groups. Old World *Trichrysis* can be divided into two subgenera, based on whether the discoidal cell is complete (*Trichrysis* s.s.) or incomplete (*Chrysidea*). The New World *Trichrysis* can also be divided into two groups based on the same characteristic. However, New World *Trichrysis* are different from the Old World forms since they have a distinct and almost articulated telomere on the male genital capsule (fig. 24). This discrete telomere has not been found in Old World *Trichrysis* (fig. 22).

We therefore propose the establishment of two new subgenera in the genus *Trichrysis*. An asterisk after a species name indicates that we have not seen the type.

Trichrysis Lichtenstein

Trichrysis (*Caenochrysis*) Kimsey and Bohart, new subgenus
(derivation: Kaeno = new, Gr.)

Subgenerotype: *Chrysis tridens* Lepeletier

Included species: *amazonica* Mocsáry, *azteca* Mocsáry, *brasiliانا* Guérin, *carinata* Say*, *divergens* Cresson, *gibbosa* Mocsáry, *mathani* Ducke*, *mucronata* Brullé*, *nigropolita* Bischoff, *parvula* Fabricius, *taschenbergi* Mocsáry, *triangulifera* Mocsáry, and *tridens* Lepeletier*.

Discussion: Members of the subgenus can be recognized by the sometimes thin but completely sclerotized outer veins of the discoidal cell in the forewing (fig. 18), and the presence of a telomere on the paramere (fig. 24).

Trichrysis (*Lorochrysis*) Kimsey and Bohart, new subgenus (derivation: Loron = strap, Gr.)

Subgenerotype: *Chrysis doriae* Gribodo

Included species: *areolata* Mocsáry, *armata* Mocsáry, *boscii* Buysson, *crotonis* Buysson, *doriae* Gribodo, *puberula* Spinola, *quadrimosa* Mocsáry, *saussurei* Mocsáry.

Discussion: This subgenus is distinguished by a faint or incompletely sclerotized discoidal cell in the forewing, with at least the anterior vein faint or lacking (fig. 17) and the presence of a telomere on the paramere. In general the species are smaller than those of *Caenochrysis*.

Trichrysis (*Trichrysis*) Lichtenstein

Subgenerotype: *Sphex cyanea* Linnaeus

Discussion: *Trichrysis* s.s. is an eastern hemisphere group, recognizable by the completely sclerotized discoidal cell and no telomere on the paramere (fig. 22).

Trichrysis (*Chrysidea*) Bischoff

Subgenerotype: *Chrysis pumila* Klug

Discussion: *Chrysidea* is also an eastern hemisphere group which lacks a telomere and has the forewing discoidal cell incomplete, since at least the anterior vein of the discoidal cell is lacking or faintly indicated.

Neochrysis Linsenmaier

Neochrysis is the largest genus in the neotropics. This genus was divided into four subgenera by Bohart (1966). We have further elaborated the characteristics of each subgenus and separated the neotropical species accordingly. The list of species under each subgenus may not be complete. Each list is based on species where we have seen the type or seen reliably determined material (type not seen indicated by an asterisk).

Neochrysis Linsenmaier, 1959. Generotype by original designation, *Chrysis punctatissima* Spinola, 1840 (nec Villers, 1789) = *Chrysis carina* Brullé, 1846.

T-III pit row obsolescent, pits, when discernible, no larger than other punctures (fig. 11); 4 distal teeth on T-III; frons without a cross carina or rarely a few traces of it, no strong carina leading back from brow to partly enclose midocellus; pronotum without a complete lateral carina; propodeum without a strong median projection just behind metanotum.

Partial list of included species: *cameroni* (Buysson), *carina* Brullé, *deuteroleuca* (Mocsáry), *inseriata* (Mocsáry), *lecointei* Ducke, *montezuma* (Cameron), *paraensis* (Ducke).

Pleurochrysis Bohart, 1963, new name for *Pleurocera* Guérin (nec Rafinesque, 1818). Subgenerotype by monotypy, *Chrysis viridis* Guérin, 1842 (nec Oliver, 1790) = *Chrysis bruchi* Brèthes, 1902.

T-III pit row usually well developed and forming a strong groove, pits larger than punctures, at least laterally (fig. 12); 4 distal teeth on T-III or rarely 6; frons with or without a cross carina (fig. 13),

sometimes a strong carina leading back to partly enclose midocellus; pronotum without a complete lateral carina; propodeum without a projection behind metanotum.

Partial list of included species: *acuta* (Brèthes), *alfkeni* (Ducke), *ameginoi* (Brèthes), *ancilla* (Buysson), *bruchii* (Brèthes), *cavifrons* (Brullé), *charruana* (Brèthes), *chilicola* (Mocsáry), *fasciifera* (Bischoff), *lynchi* (Brèthes), *mendozaana* (Mocsáry), *missionera* (Brèthes), *postica* (Brullé), *ypirangensis* (Buysson).

Exochrysis Bohart, 1963, Subgenerotype by original designation, *Chrysis panamensis* Cameron, 1888.

T-III pit row or groove well developed; 4 distal teeth on T-III; frons with a cross carina which branches back to enclose or partly enclose midocellus; pronotum with at most a partial lateral carina (fig. 5); propodeum with a strong median projection just behind metanotum (fig. 5). Partial list of included species: *imperfurata* (Gribodo), *leucophris* (Mocsáry), *leucostigma* (Mocsáry), *panamensis* (Cameron), *spinigera* (Spinola).

Ipsiura Linsenmaier, 1959. Subgenerotype by original designation, *Chrysis marginalis* Brullé.

T-III pit row or groove well developed; 2-6 distal teeth on T-III; frons sometimes with a cross carina but always with a carina leading back from brow to partly enclose midocellus; pronotum with a sharp and practically complete lateral carina or flange (fig. 4); propodeum without a projection behind metanotum (fig. 4).

Partial list of included species: *albibasalis* (Mocsáry), *bisulcata* (Ducke), *brevispinosa* (Ducke), *ellampoides* (Ducke), *friesiana* (Ducke), *genbergi* (Dahlbom)*, *klugi* Dahlbom, *leucobasis* (Mocsáry), *leucocheila* (Mocsáry), *leucochiloides* (Ducke), *longiventris* (Ducke), *marginalis* (Brullé), *myops* (Buysson), *neolateralis* Bohart, *obidensis* (Ducke), *pilifrons* (Cameron).

Argochrysis Kimsey and Bohart, new genus
(derivation: Argos = white Gr.)

Generotype: *Chrysis mesillae* Cockerell

Included species: *mesillae* (Cockerell), *trochilus* (Buysson) and a number of undescribed species.

Discussion: This genus is distinguished by F-I as long or longer than F-II in both sexes; tongue short, less than half as long as flagellum from basal fold to apex; mesopleuron with shallow transverse groove

or no groove; propodeal teeth tapering and apically pointed (fig. 14); (fig. 7) leg joints, and apical rim of T-III often white or hyaline; paramere digitate and or lobate (fig. 19); cuspis broadly rounded, and digitus equal to or shorter than cuspis and apically rounded (fig. 19).

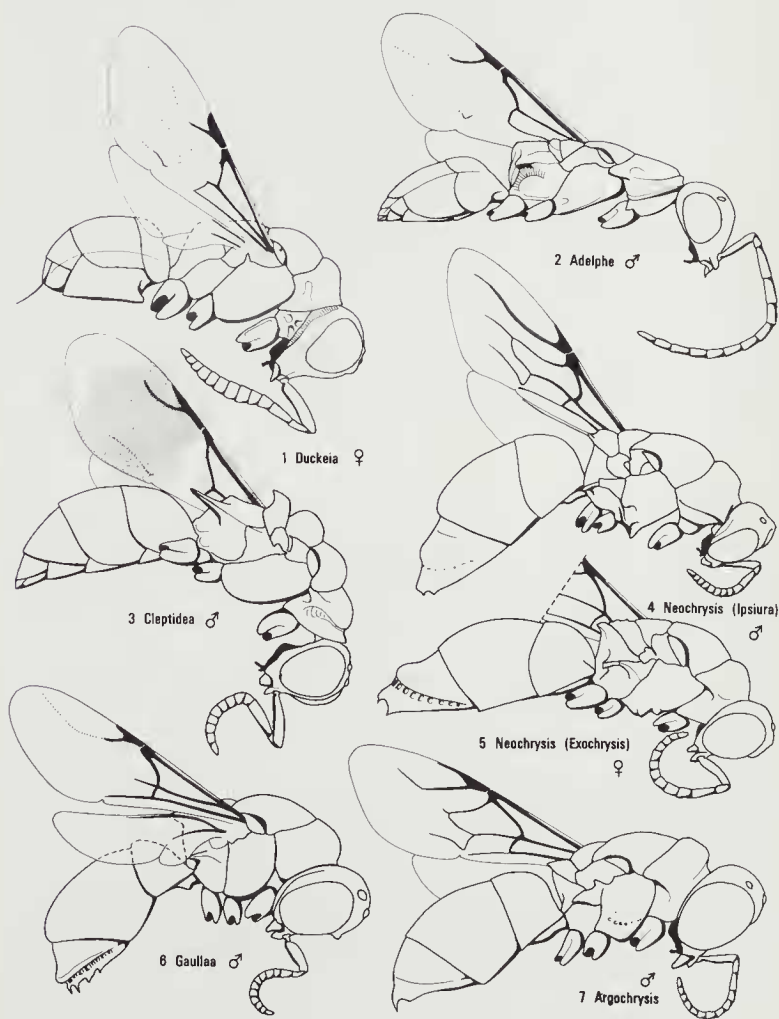
Examination of the type species of *Spintharosoma* Zimmermann, *Chrysis chrysonota* Dahlbom, from the Ethiopian Region reveals that the American species previously placed in this genus are not congeneric. In *S. chrysonota* the tongue is long, the propodeal teeth clublike (fig. 15), paramere simple and rounded and cuspis slender and tapering (fig. 21), the male F-I is less than one third as long as F-II, and the mesopleuron divided into two parts by a deep transverse groove. American species also differ from *Spintharina* (generotype *Chrysis vagans* Radovskowsky). *Spintharina* has two large teeth on the mesopleuron, lobate propodeal teeth (fig. 16), and male genitalia with simple unlobate paramere and long slender digitus and cuspis (fig. 20).

Gaullea Buysson

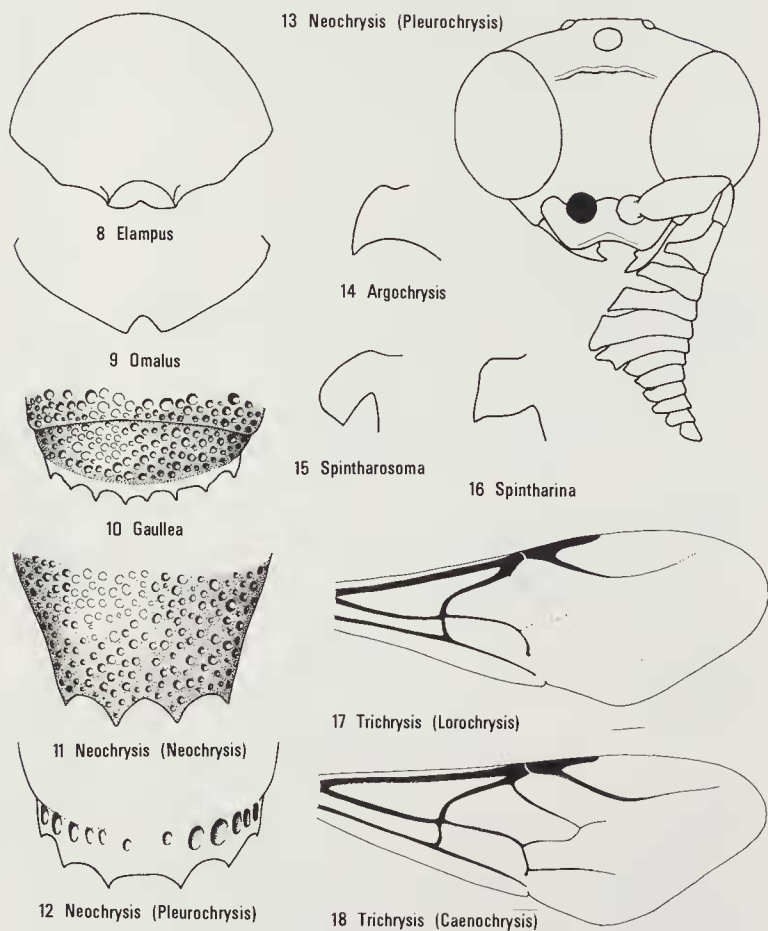
The genus *Gaullea* is an obscure and poorly known genus. *Gaullea* was originally described from a single female, collected in Chaco, Santiago del Estero, Argentina. We have seen an additional 2 females and 3 males from Santiago del Estero, Argentina, plus the type. This genus is characterized by the very short RS stub, lack of a discoidal cell in the forewing and denticulate rim of T-III (figs. 6, 10). Linsenmaier (1959) placed *Gaullea* near *Euchroeus*. However, after close examination of the wing venation we have placed *Gaullea* near *Argochrysis*, because a crease in the wing indicates that the marginal cell would be closed if the RS stub were extended. The closed marginal cell is characteristic of *Chrysis* and its relatives. The expanded and bladelike metanotum and denticulate rim of T-III suggests that *Gaullea* is closely related to *Argochrysis*. The male genitalia of *Gaullea* is similar to that of *Chrysis*, with a simple though somewhat apically lobate paramere, broad foliaceous digitus and slender setose cuspis (fig. 23).

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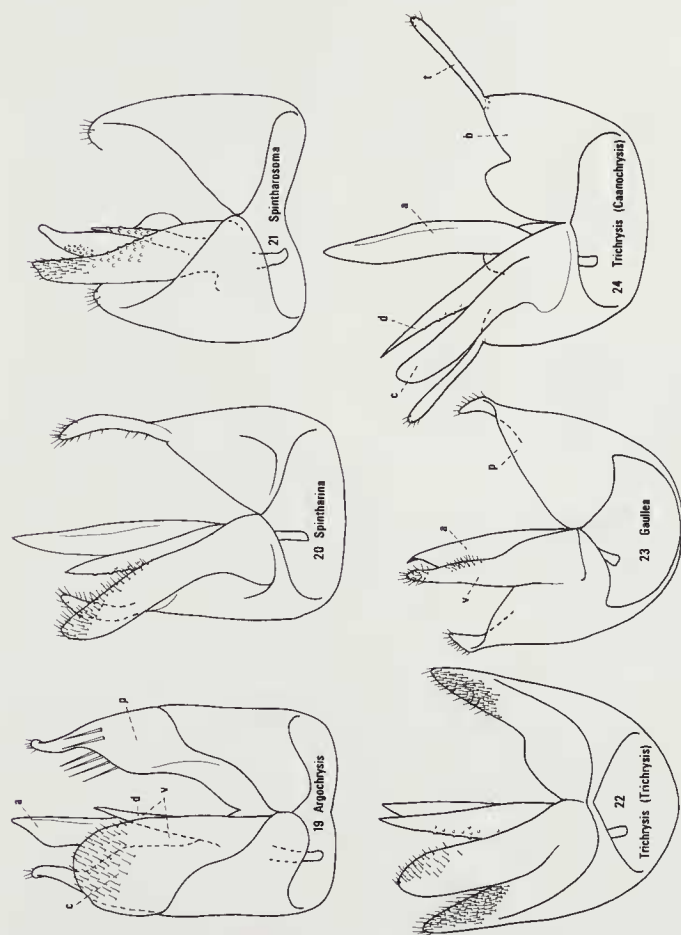
Host records for the neotropical Chrysididae are incomplete at best and nonexistent for *Nesogyne*, *Cleptidea*, *Amisega*, *Pseudospinolia* and *Gaullea*. The Amiseginae are typically phasmatid egg parasites. The remaining genera are wasp and bee parasites (table 1).



Figs. 1-7, Lateral view of body. 1. *Duckeia cyanea* Costa Lima. 2. *Adelphe mexicana* Mocsáry. 3. *Cleptidea aurora* (Smith). 4. *Neochrysis (Ipsiura) marginalis* (Brullé). 5. *Neochrysis (Exochrysis) panamensis* (Cameron). 6. *Gaullea argentina* Buysson. 7. *Argochrysis mesillae* (Cockerell).



Figs. 8-12, Apical margin of tergum III. 8. *Elampus nitidus* (Aaron). 9. *Omalus butleri* Bohart and Campos. 10. *Gaullea argentina* Buysson. 11. *Neochrysis (Neochrysis) carina* (Brullé). 12. *Neochrysis (Pleurochrysis) bruchi* (Brèthes). Fig. 13, Front view of male face of *Neochrysis (Pleurochrysis) bruchi* (Brèthes). Figs. 14-16, Anteroventral view of propodeal tooth. 14. *Argochrysis mesillae* (Cockerell). 15. *Spintharosoma chrysonota* (Dahlbom). 16. *Spintharina vagans* Radovskowsky. Figs. 17-18, Forewing venation. 17. *Trichrysis (Lorochrysis) doriae* Gribodo. 18. *Trichrysis (Caenochrysis) tridens* (Lepelletier).



Figs. 19-24, Male genital capsule with volsella and aedeagus removed from right side, (a) aedeagus, (b) basimere, (c) cuspis, (d) digitus, (p) paramere, (t) telomere, (v) volsella. 19. *Argochrysis mesillae* (Cockerell). 20. *Spintharina vagans* Radovskowsky. 21. *Spintharosoma chrysonota* (Dahlbom). 22. *Trichrysis (Trichrysis) cyanea* (Linnaeus). 23. *Gaulea argentina* Buysson. 24. *Trichrysis (Caenochrysis) iridens* (Lepelletier).

Very little biological work has been done on the neotropical chrysidids. Host data has been reported for *Omalus* by Benoist (1942), *Trichrysis*, *Chrysis* and *Neochrysis* by Perez-D'Angello (1968), Coville and Coville (1980), Ducke (1904), Fritz (pers. comm), Janvier (1933) and Ruiz (1938), *Adelphe* and *Mesitiopterus* by Krombein (1957) and *Duckeia* by Costa Lima (1936).

Table I. Host records, distribution and number of species of neotropical Chrysididae.

Subfamily Cleptinae

Cleptidea—host not recorded; southern Mexico to Brazil; 6 species.

Subfamily Amiseginae

Duckeia—Phasmatidae: *Prisopus* sp. (eggs); Brazil; 1 species.

Amisega—Phasmatidae?: Costa Rica to Brazil; 4 species.

Mesitiopterus—Phasmatidae: *Diapheromera* sp. (eggs); southern Mexico to Venezuela; 2 species.

Adelphe—Phasmatidae: *Anisomorpha*; Mexico to Brazil; 4 species.

Nesogyne—host not recorded; Dominican Republic; 1 species

Subfamily Elampinae

Omalus—Sphecidae: Pemphredoninae: *Stigmus*; Mexico, Brazil, Argentina and Chile; 5 species.

Elampus—Sphecidae (not recorded in neotropics); Cuba, Venezuela, Brazil, Argentina; Chile; 3 species.

Holopyga—Sphecidae (not recorded in neotropics); Dominican Republic, Mexico, Brazil, Peru, Argentina, Chile; 7 species.

Hedychridium—Sphecidae and Apoidea (not recorded in neotropics); Mexico to Chile; 3 species.

Hedychrum—Sphecidae: Philanthinae? (not recorded in neotropics); widespread; 6 species.

Subfamily Chrysidinae

Chrysis—Eumenidae: *Hypodynerus* and *Stenodynerus*; widespread; 12 species.

Ceratochrysis—Eumenidae, Sphecidae; Mexico: Chihuahua and Baja California; 2 species.

- Pseudospinolia*—host not recorded in neotropics; Chile; 1 species.
Argochrysis—Sphecidae: *Ammophila* (not recorded in neotropics);
 Mexico: Chihuahua and Baja California. 1 species.
Gaullea—host not recorded; Argentina; 1 species.
Trichrysis—Sphecidae: *Trypoxylon*, Eumenidae; widespread; 20
 species.
Neochrysis—Sphecidae: *Podium*, *Trypoxylon*, *Sceliphron*; wide-
 spread; 32 species.

Subfamily Parnopinae

- Parnopes*—Sphecidae: Bembicini (prob. only on *Microbembex* in
 Mexico), northern Mexico, Sonora; 1 species.

ACKNOWLEDGMENTS

We are very grateful to Ignacio and Raquel Cid del Prado for their
 work on translating the generic key into Spanish.

Key to the Genera of Neotropical Chrysididae

For brevity in the key the following abbreviations have been
 used: T for tergum, S for sternum and RS for radial sector.

1. Abdominal venter convex 2
 Abdominal venter flat to concave 7
2. T-I-II together dorsally subequal to or shorter than length of
 T-III-IV (fig. 3); pronotum with submedial transverse groove
 (fig. 3); upper frons with groove descending from midocellus
 (Cleptinae) *Cleptidea* Mocsáry
 T-I-II together dorsally much longer than length of T-III-IV (figs
 1, 2); pronotum usually without transverse groove; upper
 frons without median groove (Amiseginae) 3
3. Propodeum rounded posterolaterally (fig. 1), pronotal lobes
 usually not reaching tegulae (fig. 1) 4
 Propodeum toothed posterolaterally (fig. 2), pronotal lobes
 reaching tegulae 6
4. Pronotum medially depressed or grooved; S-II produced, keeled
 anteriorly; gena flanged; propodeum strongly produced,
 posterior face almost flat (fig. 1).... *Duckeia* Costa Lima
 Pronotum not medially depressed, S-II simple; gena not flanged;
 propodeum broadly rounded posteriorly 5

5. Scutum with notauli *Amisega* Cameron
 Scutum without notauli *Mesitiopterus* Ashmead
6. Pronotum with transverse anterior groove, female with normal wings; propodeal tooth broad, subtriangular (fig. 2)
 *Adelphæ* Moscárý
 Pronotum without transverse carina, female brachypterous, propodeal tooth slender and digitate
 *Nesogyne* Krombein
7. RS stub sclerotized for less than half marginal cell length (if vein is extended by its traces and wing crease to wing margin); outer veins of discoidal cell faint or barely indicated (fig. 6); tarsal claws various 8
 RS stub sclerotized for more than half marginal cell length (if vein is extended by its traces and wing crease to wing margin); outer veins of discoidal cell usually sclerotized (figs. 4, 5, 7); claws simple 14
8. Last visible tergum spiculate along apical margin; claws simple 9
 Last visible tergum not spiculate along apical margin; claws dentate (*Elampinae*) 10
9. Tongue exerted and reaching near base of abdomen, last visible tergum subapically depressed on either side of midline; females with three normally visible terga, males with four (*Parnopinae*) *Parnopes* Latreille
 Tongue short, not exerted; last visible tergum not subapically depressed; both sexes with three normally visible terga (*Chrysidinae*) *Gaullea* Buysson
10. Hindtarsal claw long and slender, with a medial, nearly perpendicular tooth; frons with close punctation along inner eye margins (punctures less than one puncture diameter apart; scutellum not anteriorly carinate
 *Hedychridium* Abeille de Perrin
 Hindtarsal claw without a single, medial, nearly perpendicular tooth; other characteristics various 11
11. Medial vein essentially straight or weakly curved; hindtibia and usually midtibia with a definite pit on inner surface toward apex; female S-III usually with a nodular apicomедial projection *Hedychrum* Latreille
 Medial vein strongly arched; hindtibia and midtibia without a pit on inner surface; female S-III without an apicomедial projection 12

12. Medial cell with numerous dark microsetae; last tergum with punctate medially unnotched apical margin; face hollowed and crossridged; hindtarsal claws usually with two to five subsidiary teeth (rarely only one subsidiary)
 *Holopyga* Dahlbom
 Medial cell essentially asetose; last tergum apicomediaally impunctate and usually notched or compressed and snoutlike (figs. 8, 9); face hollowed without crossridging; hindtarsal claws various 13
13. T-III apicomediaally notched (fig. 9), emarginate or simple not compressed and snoutlike; metanotum rounded, not conical or produced and bladlike; scutum impunctate or with punctures clustered along or between notauli, except *chilensis* (Mocsáry) *Omalus* Panzer
 T-III apicomediaally compressed and snoutlike (fig. 8); metanotum conical or produced and bladlike; scutum densely punctate *Elampus* Spinola
14. Radial sector ending before wing margin so that marginal cell is broadly open (fig. 4) 15
 Radial sector and its faintly sclerotized remnant narrowly closing marginal cell or almost so (figs. 7, 17, 18) 19
15. T-III apical margin smooth, slightly prolonged medially, especially in male, anterolateral angles of T-I not unusually sharp *Pseudospinolia* Linsenmaier
 T-III ending in four to six teeth; anterolateral angles of T-I unusually sharp 16
16. Propodeum with strong median projection just behind metanotum (fig. 5) *Neochrysis* (*Exochrysis*) Bohart
 Propodeum without strong median projection just behind metanotum 17
17. Pronotum with sharp and practically complete lateral carina or flange (fig. 4) T-III pit row or groove well developed (as in fig. 12) *Neochrysis* (*Ipsiura*) Linsenmaier
 Pronotum without a sharp or practically complete lateral carina or flange; T-III pit row various 18
18. T-III pit row obsolescent, pits, when discernible, no larger than other punctures (fig. 11); frons without cross carina, rarely with traces remaining and no carinae extending back toward ocelli *Neochrysis* s.s. Linsenmaier
 T-III pit row well developed and forming a strong groove, at least

- some pits larger than punctures (fig. 12); frons usually with cross carina and carinae extending back toward ocelli
- *Neochrysis (Pleurochrysis)* Bohart
19. Outer veins of discoidal cell faint (fig. 17)
- *Trichrysis (Loroachrysis)* Kimsey and Bohart
- Outer veins of discoidal cell sclerotized (fig. 18) 20
20. T-III not apicomediaally notched, usually with three to six teeth 21
- T-III apicomediaally deeply notched, lacking subsidiary teeth, except on either side of notch, central Mexico north . . . 22
21. T-III ending in three or fewer teeth or angles
- *Trichrysis (Caenochrysis)* Kimsey and Bohart
- T-III ending in four or six teeth or angles
- *Chrysis* Linnaeus
22. Tibiae with pale basal markings and T-III rim whitish; *or* metanotum conically produced (fig. 7)
- *Argochrysis* Kimsey and Bohart
- Tibiae without pale markings and T-III rim not whitish; metanotum not produced *Ceratochrysis* Cooper

Clave para los géneros neotropicales de la familia Chrysididae

1. Región ventral del abdomen convexa 2
- Región ventral del abdomen plana o cóncava 7
2. T-I-II dorsalmente subiguales o más cortos que el largo de T-III-IV (fig. 3); pronotum con hendidura submedia transversa (fig. 3); frente superior con una hendidura descendiendo del ocelo medio (Cleptinae) *Cleptidea* Mocsáry
- T-I-II dorsalmente tan largos que el largo de T-III-IV (figs 1, 2); pronotum sin o con hendidura transversal; frente superior sin hendidura media (Amiseginae) 3
3. Propodeum redondeado posteriolateralmente (fig. 1), lóbulos pronotales usualmente sin alcanzar la tégula (fig. 1) 4
- Propodeum dentado posteriolateralmente (Fig. 2), lóbulos pronotales alcanzando la tégula 6

4. Pronotum en su parte media hundido o con hendidura; S-II forma una proyección angular anteriormente; gena con proyección o borde; proprodeum evidentemente pronunciado posteriormente, extremo posterior casi plano (fig. 1) *Duckeia* Costa Lima
 Pronotum sin depresión media; S-II simple; gena sin proyección alar; propodeum distintamente redondeado posteriormente 5
5. Scutum con notauli *Amisega* Cameron
 Scutum sin notauli *Mesitiopterus* Ashmead
6. Pronotum con hendidura transversal; hembra con alas normales; diente propodeal ancho, subtriangular (fig. 2) *Adelphe* Mocsáry
 Pronotum sin hendidura transversal; hembra con alas brachypterous; diente propodeal alargado y angosto *Nesogyne* Krombein
7. RS fragmento esclerotizado, menor que la mitad del largo de la célula marginal (si la vena es extendida por sus trazos y plieque del ala marginal); venas externas de la célula discoidal ténues o apenas visibles (fig. 6); uñas tarsales variables . 8
 RS esclerotizado más de la mitad del largo de la célula marginal (si la vena es extendida por sus trazas y plieque de ala marginal); venas externas de la célula discoidal usualmente esclerotizado (figs 4, 5, 7); uñas tarsales simples 14
8. Último tergum visible, espiculado a lo largo del margin apical; uñas tarsales simples 9
 Último tergum visible, no espiculado a lo largo del margin apical; uñas tarsales dentadas (*Elampinae*) 10
9. Lengua extendida, alcanza cerca la base del abdomen; último tergum visible, subapicalmente hundido en su parte media; hembras con tres normalmente visibles terga, machos con cuatro (*Parnopinae*) *Parnopes* Latreille
 Lengua corta, no se extiende; último tergo visible no subapicalmente hundido; ambos sexos con tres normalmente visibles terga (*Chrysididinae*) *Gaullea* Buysson
10. Uñas de les tarsos posteriores largas y delgadas, con un diente medio perpendicular; frente con cerrada puntación a lo largo del margin interno del ojo (puntación menos que el diametro de una puntación distantes); scutellum no anteriormente con saliente *Hedychridium* Abeille de Perrin

- Uñas tarsales posteriores simples, diente medio perpendicular presente; otras características varias 11
11. Vena media esencialmente recta o débilmente curvada; tibia posterior y tibia media usualmente con un claro hoyo en su superficie interna, cerca de su ápice; S-III de la hembra usualmente con una proyección nodular medioapical
 *Hedychrum* Latreille
- Vena media fuertemente arqueada; tibia posterior y media hoyo sobre su superficie interna; S-III de la hembra sin una proyección medioapical 12
12. Célula media con numerosas microsetas oscuras; último tergo con mediana puntación, no alcanza el margen apical; cara cóncava y con estriaciones transversales; unas traseras usualmente con 2 a 5 dientes subsidiarios (raramente uno)
 *Holopyga* Dahlbom
- Célula media esencialmente sin setas; último tergo sin mediana puntación apical, usualmente con muescas o comprimido similar a una proyección truncada (figs 8, 9); cara cóncava sin estriaciones transversales; uñas traseras varias 13
13. T-III de la hembra medio apical con muescas (fig. 9), emarginado o simple no comprimido o comprimido y sin proyección truncada; metanotum redondeado, no cónico o aplanado; scutum con puntación cerrada a lo largo o entre notauli, excepto *chilensis* (Mocsáry) *Omalus* Panzer
- T-III de la hembra medio apical comprimido y con projection truncada (fig. 8); metanotum con proyección cónica o aplanada; scutum densamente punteado *Elampus* Spinola
14. Sector radial termina antes del margen del ala, célula marginal es ampliamente abierta (fig. 4) 15
- Sector radial con célula marginal angosta y débilmente esclerotizado o casi cerrada (figs. 7, 17, 18) 19
15. T-III margen apical liso, ligeramente prolongado, en su parte media, especialmente en machos; ángulos anterolateral de T-I no extraordinariamente agudos
 *Pseudospinolia* Linsenmaier
- T-III termina en cuatro o seis dientes; ángulos anterolaterales de T-I extraordinariamente agudo 16
16. Propodeum con fuerte proyección media justo atrás del metanotum (fig. 5) *Neochrysis (Exochrysis)* Bohart

- Propodeum sin fuerte proyección media, justo atras del metanotum 17
17. Pronotum con borde agudo y prácticamente completa carina lateral (fig. 4); T-III con hilera de hoyos bien desarrollados formando una hendidura (como fig. 12)
 *Neochrysis (Ipsiura)* Linsenmaier
- Pronotum sin borde agudo o completa carina; T-III hilera de hoyos varios 18
18. T-III hilera de hoyos casi ausentes, hoyos cuando son discernibles, no tan largos que otras puntaciones (fig. 11); frente sin carina cruzada, raramente con remanentes y sin extenciones de la carinae hacia los ocelos
 *Neochrysis* s. s. Linsenmaier
- T-III con hilera de hoyos bien desarrollado y formando un fuerte surco, algunos hoyos tan grandes que una puntacion (fig. 12); frente usualmente con carina cruzada y carinae extendiendase hacia los ocelos *Neochrysis (Pleurochrysis)* Bohart
19. Venas externas de la célula discoidal débiles (fig. 17)
 *Trichrysis (Lorochrysis)* Kimsey and Bohart
- Venas externas de la célula discoidal esclerotizadas (fig. 18) ..
 20
20. T-III medio apical sin muescas, usualmente con tres, cuarto o seis dientes 21
- T-III medio apical profundamente con muescas, dientes subsidiarios ausentes, excepto sobre ambos lados de la muesca; central y norte de México 22
21. T-III terminado en tres o algunos dientes o ángulos
 *Trichrysis (Caenochrysis)* Kimsey and Bohart
- T-III terminado en cuatro o seis dientes o ángulos
 *Chrysis* Linnaeus

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